work increase the risk of needle-stick injury. If the rule is that no risk to the provider is acceptable, regardless of the benefit to the patient, very few interventions in the field would be possible.

In fact, the greatest life-threatening occupational hazard for paramedics is trauma from motor vehicle crashes. If the approach suggested by Verbeek and associates were extended to transportation risks, paramedics would never exceed posted speed limits, would never proceed through a red light and might not venture out on a dark, snowy night at all.

The authors' analysis does a disservice to the brave men and women, dedicated professionals all, that I have encountered in this discipline.

Howard J. Ovens
Physician
Mount Sinai Hospital
Toronto, Ont.

Reference

1. Verbeek PR, Schwartz B, Brugess RJ. Should paramedics intubate patients with SARS-like symptoms? [editorial]. *CMAJ* 2003;169(4):299-300.

The recommendation of Richard Verbeek and associates[1] that paramedics not intubate patients with SARS-like symptoms in the prehospital setting and that such patients be transported to the nearest emergency department derives from the flawed premise that all situations necessitating definitive airway management are identical in terms of the level of inherent threat to paramedics. This is not the case.

Part of the preparation for performing any endotracheal intubation in the field is a risk–benefit assessment of the procedure in that instance. The paramedic must determine whether the patient is likely to benefit from the procedure, whether the patient is likely to suffer an adverse outcome without it and whether performing the procedure in the field poses an unacceptable risk to paramedics and others.

The difficulty posed by SARS is that the risk of disease transmission during endotracheal intubation seems high, yet it cannot be quantified, and reports of widespread vector transmission with resultant disease outbreaks among medical staff in attendance at these procedures are anecdotal.

Ultimately, I believe that the final decision on intubation of patients with SARS-like symptoms should rest with those charged with the responsibility for performing the procedure, the advanced care paramedics, just as it does for all other procedures and types of care that they render every day. Paramedics are well trained and generally proficient in making critical decisions under enormously stressful conditions. Furthermore, they are held accountable for their actions and accept this scrutiny as part of their work environment.

Stephen L. Urszenyi
Advanced Care Paramedic
Toronto EMS
Toronto, Ont.

Reference

1. Verbeek PR, Schwartz B, Burgess RJ. Should paramedics intubate patients with SARS-like symptoms? [editorial]. *CMAJ* 2003;169(4):299-300.

As the author of an unpublished report on personal protective equipment (PPE, consisting of double gowns, double gloves, Tyvek hood, N95 mask, goggles and face shield for airway management of a possible SARS patient) prepared for the Sunnybrook Paramedic Program Committee, I was asked by Richard Verbeek to comment on the *CMAJ* commentary[1] recommending that paramedics not intubate patients with SARS-like symptoms, with or without a personal protective system (also known as a positive-pressure system or PPS; described in Appendix A of an Ontario Ministry of Health directive[2]).

Verbeek and associates[1] conclude that paramedics should provide ventilatory support by using a bag valve mask (BVM) rather than intubation. I assert that it is not possible to consistently maintain a BVM seal in the prehospital environment. Consequently, neither intubation nor BVM ventilation is safe when performed by people using standard PPE. A ministry of health directive to Ontario hospitals states that a patient with a suspected communicable respiratory disease is to be placed in isolation and that no ventilatory assistance is to be attempted until a "protected team" using PPS is available.[2]

A recent email survey of Toronto paramedics, the foundation of my report, indicated that the "new normal" standard of PPE as used in hospitals fails to protect paramedics in their unique work environment. In fact, PPE frequently had to be removed because of dangerous fogging and severe shortness of breath.

Should paramedics discontinue all interventions involving respiratory assistance? The seemingly obvious conclusion is that paramedics need better head and face protection, which should, at the very least, decrease vision problems, aid in heat dissipation and not impede breathing. The only type of product with these attributes is a PPS.

I have undertaken a field trial of a powered helmet-style PPS with a disposable hood (FreedomAire PPS, ViaSys Healthcare, Stackhouse Division, Wheeling, Ill. [www.corpakmedsystems.com/products/stackhouse/helmet.htm], distributed in Canada by Summit Technologies; the cost of helmet, fan and battery is just under $1000, and the disposable mini-togas cost $250 for 12). The helmet, mini-toga and battery can be easily carried by a paramedic at all times. During normal intubations the helmet is used with a face shield and an N95 mask, but without the filtering toga. In high-risk situations the mini-toga hood is donned to offer better protection (99.9% viral filtration) and improved visibility; it is also cooler than the Tyvek hoods supplied as standard PPE.

When the disposable mini-toga is used in conjunction with standard PPE, the donning, removal and disposal procedures each take approximately 30 to 45 seconds (see video demonstration at www.cmaj.ca). Because a paramedic can remove the device without assistance before driving, there is no risk of contaminating the driver's compartment and no reason for the paramedic's partner to leave the intubated patient unattended.

In conclusion, the "new normal" PPE standards are inadequate in the prehospital setting. In certain situations a PPS is the only means of achieving the balance between patient care and paramedic safety.

David J. Hutcheon
Advanced Care Paramedic
Toronto EMS
Toronto, Ont.

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1. Verbeek PR, Schwartz B, Burgess RJ. Should paramedics intubate patients with SARS-like symptoms? [editorial]. *CMAJ* 2003;169(4):299-300.
2. *Directive 03-11. Directive to all Ontario acute care hospitals for high-risk procedures.* Toronto: Ontario Ministry of Health and Long-Term Care; 2003 June 16. Available: www.health.gov.on.ca/english/providers/program/pubhealth/sars/docs/docs2/dir_acute_care_061603.pdf (accessed 2003 Oct 24).

[The authors respond:]

We are not surprised by the wide-ranging opinions expressed in response to our commentary.[1] The 2 physicians suggest that our level of concern for paramedic protection is unwarranted. Although our commentary did not clearly state that our position was in the context of a SARS outbreak as intended, we continue to feel that prehospital intubation of patients with SARS-like symptoms (SLS) in this circumstance poses an unacceptable risk to paramedics. During a SARS outbreak, all patients with SLS should be considered to have SARS until proven otherwise. Schabas' statements regarding ascertainment and the risk of intubation lack insight into the uniqueness of the prehospital environment where occupational and admission histories are frequently unavailable and intubation of a febrile, coughing patient is never straightforward. Moreover, he fails to recognize the evidence that all paramedics who contracted SARS did so by coming into contact with people who were neither hospital workers nor recent inpatients.[2] Interestingly, the situations in which Ovens prescribes risk-taking behaviour for paramedics are areas where efforts to reduce risk are ongoing. These include limitations on the use of lights and sirens and the introduction of safe catheters for intravenous initiation.[3,4]

We feel it is no more acceptable to expect underprotected paramedics to intubate patients with SLS during a SARS outbreak than to have underprotected paramedics enter a building with a suspected Sarin gas release. Would Ovens want to send paramedics headlong into the Sarin fog under the guise of an "occupational hazard"? Who would want to perform an awake intubation, on a patient with SLS lying on a landing between 2 staircases, without having access to the specialized protective equipment he calls for in a recent Canadian Association of Emergency Physicians position statement?[5]

Urszenyi construed our commentary to suggest that all situations requiring airway management pose an identical threat. Our premise is quite the opposite. In the end, the paramedic will make the final decision as to whether to intubate a patient with SLS. Our responsibility is to define potential risk, provide guidance and suggest alternatives. We do not feel it is appropriate for paramedics to be expected to "go it on their own."

We are unaware of any evidence that the "new normal" standard of PPE fails to protect paramedics, as asserted by Hutcheon. Nor are we personally aware of any paramedic who developed probable or suspect SARS once PPE was introduced for all patient encounters. Hutcheon's description of a powered helmet-style PPS is intriguing. We and many others consider this equipment to be necessary but not sufficient to create optimal circumstances for intubation of patients with SARS and SLS.[5,6]

Our recommendations are in no way a disservice to the bravery and commitment of paramedics. Instead they demonstrate that we consider paramedics to be "canaries in the mine" and at higher risk than most other health care workers. Emergency medical services administrators and medical directors understand this and are working to create guidelines that respect the primacy of the "principle of paramedic safety."[4] Our paramedics deserve no less.

Robert J. Burgess
Advanced Care Paramedic
P. Richard Verbeek
Brian Schwartz
Divison of Prehospital Care
Sunnybrook and Women's College
Health Sciences Centre
University of Toronto
Toronto, Ont.

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1. Verbeek PR, Schwartz B, Burgess RJ. Should paramedics intubate patients with SARS-like symptoms? [editorial]. *CMAJ* 2003;169(4):299-300.
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3. Peate WF. Preventing needlesticks in emergency medical system workers. *J Occup Environ Med* 2001;43(6):554-7.
4. Kahn CA, Pirrallo RG, Kuhn EM. Characteristics of fatal ambulance crashes in the United States: an 11-year retrospective analysis. *Prehosp Emerg Care* 2001;5(3):261-9.
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6. Cooper A, Joglekar A, Adhikari N. A practical approach to airway management in patients with SARS. *CMAJ* 2003;169(8):785-7.

Revisiting Helsinki

Your editorial about the Helsinki Declaration[1] was probably the first indication of unequivocal support from a developed country for the developing countries' cry for justice, even if only (but hopefully just for the time being) in the arena of clinical trials.